

REMARKS

Claims 1-6 are pending in this application. Claim 6 is rejected under 35 U.S.C. § 101 as being directed to a use without setting forth any steps involved in the process. Claims 2-4 and 6 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as anticipated by Reynolds et al., U.S. 3,494,731. Claims 1, 4 and 5 are rejected under 35 U.S.C. § 102(b) as anticipated by Stiles et al., U.S. 3,563,700. Claim 1 is rejected under 35 U.S.C. § 102(b) as anticipated by Murray et al., U.S. 3,660,131.

Applicants have amended certain of the claims and added new claims to more clearly define and distinctly characterize Applicants' novel invention. Support for the amendments and for the new claims can be found in the specification and the claims as originally filed. Support for the amendments to claim 1 can be found at claims 2 and 3 as originally filed and at page 2, lines 15-20. Support for the amendment to claim 4 can be found at page 2, lines 9-14. Support for the amendments to claim 6 can be found in claim 1 as originally filed and at page 2, lines 3-8. New claim 7 is supported at least at page 2, lines 9-14. New claim 8 is supported at least at page 2, lines 26-27. New claims 9 and 10 are supported at least at page 3, lines 1-5. Support for new claim 11 is found at least at page 3, lines 11-15. New claims 12 and 13 are supported at least at page 3, lines 17-20. New claim 14 is supported at least at page 3, lines 5-6. New claim 15 is supported at least at page 2, lines 3-8. Applicants respectfully submit that the amendments and new claim presented herein add no new matter.

Applicants respectfully request entry and consideration of the foregoing amendments, which are intended to place this case in condition for allowance.

II. Claim 6 Is Directed to Statutory Subject Matter.

Claim 6 stands rejected under 35 U.S.C. § 101 as being directed to a use without setting forth any steps involved in the process. Applicants respectfully traverse this rejection based on the claims as amended.

Claim 6 has been amended into a product-by-process claim, in which process steps are affirmatively recited. Accordingly, Applicants request that the rejection of claim 6 under 35 U.S.C. § 101 be withdrawn and that claim 6 be allowed.

III. Claims 2-4 and 6 Are Definite.

Claims 2-4 and 6 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection based on the claims as amended.

The Examiner has indicated that claims 2-4 are indefinite because they recite percents without indicating whether they are molar percents or weight percents. As to claims 2 and 3, one of skill in the art would understand an aqueous solution and particularly a slurry, having a concentration expressed as a percentage, to be a weight percentage and not a mole percentage. Accordingly, one of skill in the art would understand the bounds of the claims as they are presented, and claims 2 and 3 are definite.

Claim 4 would similarly be understood by one of skill in the art to refer to a weight percentage rather than a mole percentage. Claim 4 has been amended to make this explicit. Accordingly, claim 4 is believed to be definite as currently presented.

The Examiner has indicated that claim 6 is indefinite for not setting forth any steps involved in the process. As indicated above, claim 6 has been amended into a product-by-process claim, in which process steps are affirmatively recited. Accordingly, Applicants request

that the rejection of claim 6 under 35 U.S.C. § 112, second paragraph, be withdrawn and that claim 6 be allowed.

IV. The Claims Are Novel Over Reynolds.

Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as anticipated by Reynolds et al., U.S. 3,494,731. Applicants respectfully traverse this rejection based on the claims as amended.

Reynolds fails to disclose each and every element of claims 1 and 5. Reynolds et al. fails to disclose reacting an aqueous solution of aluminum sulfate and a slurry of calcium hydroxide to form satin white as required by claim 1. Reynolds specifies that his reaction is “carried out in the solid or semi-solid state throughout most of the reaction.” Col. 4, lines 7-8. The Reynolds reaction is identified as being stable at normal temperatures, since the reaction will not proceed in the absence of water. Col. 4, lines 13-14. Reynolds must heat his mixture to 90-95°C to enable his reaction to proceed. Col. 4, line 20. The reaction of the present application, on the contrary, may take place at temperatures as low as between 15 and 45°C, see page 3, lines 5-6 of the present specification, providing lower processing costs.

As Reynolds fails to disclose each and every element of claim 1, Applicants submit that claim 1 is novel over Reynolds and that claim 5 and new claims 6-15, which depend from claim 1, are likewise novel over Reynolds. Reconsideration and allowance of the claims over Reynolds is therefore respectfully requested.

V. The Claims Are Novel Over Stiles et al.

Claims 1, 4 and 5 are rejected under 35 U.S.C. § 102(b) as anticipated by Stiles et al., U.S. 3,563,700. Applicants respectfully traverse this rejection based on the claims as amended.

Stiles et al. fail to disclose each and every element of claim 1. Stiles et al. fail to disclose the reaction of aluminum sulfate and calcium hydroxide in a planetary kneader mixer to form satin white as required by claim 1. Stiles et al. disclose only agitating sufficiently fast to maintain a fast-moving vortex in the reaction mixer, col. 3, lines 40-42, without disclosing the use of a planetary kneader mixer, without specifying any particular degree or range of shearing forces contemplated. As discussed at page 3 of the present specification, the use of a planetary kneader mixer provides very high shearing forces such that a satin white having high solids content and favorable particle size and particle size distributions can be obtained.

The Examiner has cited to column 7, lines 41-42 of Stiles et al. as disclosing at least 97.7% solids based on the reaction mixer. That citation actually refers to the purity of the hydrated lime used as an ingredient, and not to the solids content during the reaction. As identified at column 3, lines 20-37 of Stiles et al., an aqueous alum solution is added to this hydrated lime slurry, thus changing the solids content from the 97.7% referenced by the Examiner. Indeed, Stiles et al. note the importance of regulating the total water content of the mixture, col. 2, lines 49-51, and indicate that the total amount of water present should be enough to produce an aqueous mixture of satin white containing between about 5% and about 12% by weight satin white solids, far below that of present claim 4.

As Stiles et al. fail to disclose each and every element of claim 1, Applicants submit that claim 1 is novel over Stiles et al. and that claim 5 and new claims 6-15, which depend from claim 1, are likewise novel over Stiles et al. Reconsideration and allowance of the claims over Stiles et al. is therefore respectfully requested.

VI. The Claims Are Novel Over Murray et al.

Claim 1 is rejected under 35 U.S.C. § 102(b) as anticipated by Murray et al., U.S. 3,660,131. Applicants respectfully traverse this rejection based on the claims as amended.

Murray et al. fail to disclose each and every element of claim 1. Murray et al. fail to disclose the reaction of aluminum sulfate and calcium hydroxide in a planetary kneader mixer to form satin white as required by claim 1. Murray et al. disclose only stirring with a blending or kneading action, col. 2, lines 15-16, without specifying any particular apparatus, from which the degree of shearing forces might be determined, and without specifying any particular degree or range of shearing forces contemplated. The smooth quality of the Murray et al. product is instead attributed to the inclusion of sodium hydroxide. See col. 1, lines 33-45. In particular, the reference to the lack of improved qualities when the satin white was prepared instead in the presence of sodium sulfate (or in the absence of either), see col. 1, lines 41-45 and col. 3, lines 22-29, indicates that insufficient shearing forces are attained by the Murray et al. process. Additionally, the extended rate of time for the reaction to occur (45 minute during which the aluminum sulfate was added and an additional hour, see col. 2, lines 8-19) provide further proof that the Murray et al. process does not achieve the high shearing forces of the present application. As discussed at page 3 of the present specification, the use of a planetary kneader mixer provides very high shearing forces such that a satin white having high solids content and favorable particle size and particle size distributions can be obtained.

As Murray et al. fail to disclose each and every element of claim 1, Applicants submit that claim 1 is novel over Murray et al. and that claim 5 and new claims 6-15, which depend from claim 1, are likewise novel over Murray et al. Reconsideration and allowance of the claims over Murray et al. is therefore respectfully requested.

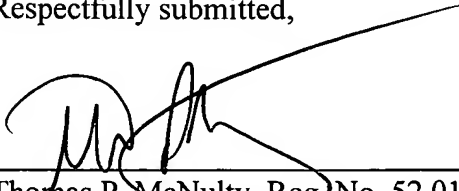
VII. Conclusion

Applicants submit that all of the claims are now in condition for allowance, which action is requested. If a telephone conversation with Applicants' attorney would expedite prosecution of the above-referenced application, the Examiner is urged to call the undersigned at the number below.

The Commissioner is hereby authorized to apply any required charges or credits to our Deposit Account No. 19-0733.

Respectfully submitted,

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